IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claims 1, 7, 13, 19, 25, 27, 31, 33 and 34 in accordance with the following:

1. (Currently Amended) A recording medium comprising a high melting point recording layer between first and second dielectric layers, the high melting point recording layer consisting of at least one of tungsten~~,~~ and tantalum, ~~a tungsten compound and a tantalum compound~~ wherein, when recording an information, by laser irradiation from the direction of the first dielectric layer, the recording layer is swollen into the directions of the first and second dielectric layers at the laser-irradiated domain and crystalline particles of the recording layer and the first and the second dielectric layers are formed by the reaction and diffusion by the laser irradiation.

2-5. (Cancelled)

6. (Previously Presented) The recording medium of claim 1, further comprising a reflective layer on the second dielectric layer.

7. (Currently Amended) A method of recording ~~and/or reproducing~~ information on~~/from~~ a recording medium having a high melting point recording layer between first and second dielectric layers, the method comprising:

irradiating a laser beam onto the recording medium to induce reaction and diffusion in the high melting point recording layer and the first and second dielectric layers such that the recording layer is swollen into the directions of the first and second dielectric layers at the laser-irradiated domain and crystalline particles of the recording layer and the first and the second dielectric layers are formed by the reaction and diffusion by the laser irradiation,

wherein the high melting point recording layer consists of at least one of tungsten~~,~~ and tantalum~~, a tungsten compound, and a tantalum compound~~.

8-11. (Cancelled)

12. (Previously Presented) The method of claim 7, wherein the recording medium further comprises a reflective layer on the second dielectric layer.

13. (Currently Amended) An apparatus for reproducing information from a recording medium having a high melting point recording layer between first and second dielectric layers, the apparatus generating plasmon using crystalline particles of the high melting point recording layer and the first and second dielectric layers as a scattering source to reproduce information recorded in the recording layer using a super-resolution near-field structure regardless of a diffraction limit of a laser, wherein the crystalline particles are swollen into the directions of the first and second dielectric layers, and wherein the high melting point recording layer consists of at least one of tungsten~~,~~ and tantalum~~, a tungsten compound, and a tantalum compound~~.

14-17. (Cancelled)

18. (Previously Presented) The apparatus of claim 13, wherein the recording medium further comprises a reflective layer on the second dielectric layer.

19. (Currently Amended) A method of reproducing information from a recording medium having a high melting point recording layer between first and second dielectric layers, the method comprising generating plasmon using crystalline particles of the high melting point recording layer and the first and second dielectric layers as a scattering source to reproduce information recorded in the recording layer using a super-resolution near-field structure regardless of a diffraction limit of a laser, wherein the crystalline particles are swollen into the directions of the first and second dielectric layers, and wherein the high melting point recording layer consists of at least one of tungsten~~,~~ and tantalum~~, a tungsten compound, and a tantalum compound~~.

20-23. (Cancelled)

24. (Previously Presented) The method of claim 19, wherein the recording medium further comprises a reflective layer on the second dielectric layer.

25. (Currently Amended) A high-density recording medium comprising:

a polycarbonate layer;

a first dielectric layer;

a high melting point recording layer, the high melting point recording layer consisting of at

least one of tungsten, and tantalum~~, a tungsten compound, and a tantalum compound~~; and

a second dielectric layer, wherein crystalline particles of the recording layer and the first and second dielectric layers generate surface plasmon when reproducing information of the high-density recording medium,

wherein the crystalline particles are swollen into the directions of the first and second dielectric layers.

26. (Cancelled)

27. (Currently Amended) The high-density recording medium of claim 25, wherein, when recording an information, the recording medium is irradiated with a laser beam of approximately 11 mW and 405 nm wavelength, heating the recording layer equal to or above~~approximately~~ 600°C.

28. (Cancelled)

29. (Previously Presented) The high-density recording medium of claim 25, further comprising a reflective layer formed on the second dielectric layer.

30. (Previously Presented) The high-density recording medium of claim 29, wherein the reflective layer comprises aluminum and/or silver.

31. (Currently Amended) A method of recording and~~/or reproducing~~ information ~~from and/or~~ on a recording medium having a high melting point recording layer, the high melting point recording layer consisting of at least one of tungsten, and tantalum~~, a tungsten compound, and a tantalum compound~~ formed between first and second dielectric layers, the method comprising:

irradiating the recording medium with a laser beam;

heating the recording layer inducing a reaction and diffusion in a laser-irradiated domain;

forming crystalline particles in the recording layer and the first and second dielectric layers, the crystalline particles being swollen into the directions of the first and second dielectric layers; and

recording ~~and/or reproducing~~ information on the ~~information medium~~recording layer in the form of marks smaller in size than a diffraction limit of the laser beam.

32. (Previously Presented) The method of claim 31, wherein the laser beam irradiating the recording medium is of approximately 11 mW and 405 nm wavelength.

33. (Currently Amended) The method of claim 32, wherein the recording layer is heated equal to or above ~~approximately~~ 600°C.

34. (Currently Amended) The method of claim ~~31~~19, wherein the ~~recording and/or~~ reproducing of the information on the recording medium is achieved with a carrier to signal ratio (CNR) of approximately 45 dB for a mark length of 170 nm.